Notes on the Mollusca of Prince William Sound, Alaska. Part II

BY

ROBERT R. TALMADGE

Willow Creek, California 95573

(Plate 22)

This is a second paper on the mollusks observed and collected during the summer of 1965, on and about Prince William Sound at the head of the Gulf of Alaska. As in the earlier discussion, I will stress the extension of published ranges, ecology, abundance or paucity of species rather than taxonomy. The names of taxa used will be those of Dall (1921), Oldroyd (1924-1927), and Keen (1937), which are available in most libraries. Explanations, and citations to other authors will only be made where needed for clarification.

The following data have been listed under Orders and Families for convenience, and there is no doubt in our minds that other species may be found inhabiting the same region. Taxonomy will also probably be changed as more detailed studies are made.

ARCHAEOGASTROPODA

Trochidae

Calliostoma ligatum (Gould, 1849)

Eyerdam (1960) lists the species from the Kodiak group of islands, but did not record the species from Drier Bay (1924), Knight Island, Prince William Sound. We, too, failed to locate the species at Squirrel Island (Knight Island group) and at the mainland localities of Falls and Eshamy Bays on the Kenai Peninsula. However, shells of this species were common at localities along the Montague Passage, but all specimens were small, the largest measuring only 14 mm both in diameter and in height. All shells were highly colored, matching *Calliostoma ligatum pictum* Dall, 1919.

Solariella peramabilis Carpenter, 1864

Scattered specimens were dredged between 5 and 25 fathoms at various localities along Montague Channel. This species can not be considered common based on the number of specimens taken by the two of us. This locality appears to represent a northern extension of the published range of the species.

Solariella obscura (Couthouy, 1838)

This small *Solariella* was the more common of the two species that were dredged, and although Dall (1921) does not list the species, both Oldroyd (1927) and Keen (1937) give a distribution that would include Prince William Sound.

Cidarina cidaris (A. Adams in Carpenter, 1864)

A few specimens were dredged between 17 and 25 fms., from a sandy-mud bottom. Eyerdam (1924) lists the species from this region.

The genus *Margarites* was well represented at Prince William Sound. Specimens were forwarded to Dr. James H. McLean of the Los Angeles County Museum, a specialist in this genus, for examination. The names used herein are those used in the collections of the Los Angeles County Museum.

Margarites pupillus (Gould, 1849)

This was perhaps the most common species of the genus and could be collected at all suitable localities. It is well within the known range of the species.

Margarites rhodia Dall, 1920

Eyerdam (1924) does not refer to this species, and Keen (1937) places the species at only 55° North Latitude; we found it in deeper waters, sympatric with *Margarites pupillus*. It is possible that shells referable to *M. rhodia* may turn up in other sets of the more common *M. pupillus*.

Margarites sp.

A single example of an unknown, rather coarsely corded, shell was found in the collection. Reference is made here to this specimen, not for taxonomic purposes but rather to stress the abundance of species in the region.

Margarites helicinus (Phipps, 1774)

Specimens of these smooth pink shells were probably the second most commonly encountered in the area; they were found both on algae and on rocky faces sheltered by algae.

Margarites beringensis E. A. Smith, 1899

Smooth brown specimens were identified by Dr. McLean as belonging to this species. We observed and collected them in small numbers; perhaps the largest numbers were picked off algae which came up with a fouled anchor at Port Chalmers, Montague Island. Baxter has recorded the species several times, but always only in small numbers.

Lirularia parcipicta (Carpenter, 1864)

This small species was not uncommon but appears to have been missed by previous workers.

Lirularia succincta (Carpenter, 1864)

This species, as *Lirularia parcipicta,* was taken from under rocks; a search in the available literature indicated that both of these two small species had previously been recorded only from Sitka. Prince William Sound is about five degrees of Latitude north of Sitka.

NEOGASTROPODA

Cancellariidae

Three species belonging to this family were taken in Prince William Sound by dredging. If we accept the information in the literature, two additional species may be found; and one of the three species collected might be divided into three subspecies. To me a subspecies is a distinct geographic entity and the idea of overlapping distribution of subspecies is unacceptable. However, this is not a taxonomic discussion, and as the descriptions of the subspecies are, to me at least, not sufficiently clear, I will use only nominate names. Few living specimens were obtained by dredging, and our results indicate that the family is not common in this region.

Cancellaria circumcincta Dall, 1873

A few living and a few dead examples were dredged off Port Chalmers, Montague Island from a mud bottom in 17 fathoms.

Cancellaria modesta Carpenter, 1865

Only a few specimens were taken in association with *Cancellaria circumcincta* at Port Chalmers, and a few were obtained in 25 fathoms off Woodcock Point, Montague Island.

Admete couthouyi Jay, 1839

One living and a few dead specimens were dredged off Woodcock Point, Montague Island, in 25 fathoms, on a mixed bottom of sand, shell, and broken bryozoa. According to the literature, there are supposed to be three subspecies or geographical races, all three of which are to be found in Prince William Sound. The material that we dredged and additional material in the Baxter collection did not reveal any noticeable difference in the shells; thus, only the nominate species is reported here.

Muricidae

Ceratostoma foliatum (Gmelin, 1791)

A token set of specimens of this species was collected, as this animal was very common in the proper ecological situations over much of Prince William Sound. The northern limit of the range of this species, according to literature, is Sitka, Alaska, and the present locality is much farther north, thus extending the range considerably.

Ocenebra interfossa (Carpenter, 1864)

Eyerdam (1924) referred to a single specimen of this species, dredged at Drier Bay, Knight Island, Prince William Sound. We took specimens in small numbers living on an intertidal rocky reef at the entrance to Stockdale Harbor on Montague Island. The specimens that we collected were an ashy grey, more pallid than specimens I had observed and collected at more southern stations.

Ocenebra lurida (Middendorff, 1848)

Middleton Island appears to be the northern-most recorded locality for this species in literature. We collected a few living examples in association with *Ocenebra interfossa* on the exposed barrier reef at Stockdale Harbor.

Trophonopsis tenuisculpta (Carpenter, 1866)

A few living specimens were taken on the intertidal reefs at both Stockdale Harbor and Woodcock Point. This species is nearly as common as *Boreotrophon multicostatus.*

Boreotrophon multicostatus (Eschscholtz, 1829)
(Plate 22, Figure 2)

This species was quite common in suitable ecological sites. Our collecting area is well within the range of the species.

Boreotrophon pacificus (Dall, 1902)
(Plate 22, Figure 1)

Specimens dredged in Prince William Sound seem to be referable to this species. All were very similar, with a long canal and with 18 to 20 varices. The species is uncommon in the Sound, and only one living example was dredged.

Boreotrophon stuarti (E. A. Smith, 1880)

All of the specimens obtained were collected between McLeod and Hanning Bays on Montague Island. Most

of the shells were extricated from crevices which in pre-earthquake times had been situated in the deep intertidal or shallow subtidal levels. A few living examples were collected from the deep intertidal levels of this rocky reef.

Thais lamellosa (Gmelin, 1791)

Although the species was abundant throughout the area, only two token sets were taken, representing the two basic formations of the shell in this region. The populations of Hinchinbrook, Green, Channel, and Montague Islands were so similar as to be referred to as a single "Morph." All specimens were thick, the spire medium in height, and the sculpturing rather coarse, with dull coloration on most specimens. In contrast, the shells taken at Squirrel Island (Knight Island group), and a set available from Drier Bay on Knight Island were very distinct. These had an extremely tall spire, were finely and sharply sculptured, and were in most cases white in color.

Thais lima (Gmelin, 1791)

(Plate 22, Figure 8)

Two color phases were noted in this species. Hawkins, Hinchinbrook, and Montague Island specimens were all dull with a purple interior. Specimens from Squirrel and Knight Islands, as well as from mainland localities on the Kenai Peninsula (west side of the Sound), were white with a yellowish aperture. This was the only difference observed in the species over the region of the Sound.

Thais emarginata (Deshayes, 1839)

Only dead shells were found on the elevated rocky shore line at Woodcock Point, Montague Island. Baxter had taken the species from several additional localities, prior to the earthquake, usually from more exposed sections of the coastline. The species appears to be less common in this region than in more southern localities. All of the specimens had the rather tall apex and the spindle-shaped whorls of Dall's *Thais emarginata projecta.*

Thais canaliculata (Duclos, 1832)

One specimen was picked up by Baxter on the elevated reef at Woodcock Point on Montague Island. The habitat evidently was rather limited even in pre-earthquake time, as the reefs were covered chiefly with serpulid worms and a leafy bryozoan, rather than the barnacle-mussel association. The species is reputed to be more abundant on the exposed or seaward side of the Sound.

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Explanation of Plate 22

Figure 1: *Boreotrophon pacificus* (Dall, 1902). Woodcock Point, McLeod Bay, Montague Island

Figure 2: *Boreotrophon multicostatus* (Eschscholtz, 1829). Woodcock Point, McLeod Bay, Montague Island

Figure 3: *Opalia wroblewskyi* (Mörch, 1786). (see The Veliger, vol. 9, no. 1, p. 85)

Figure 4: *Epitonium* cf. *E. caamanoi* Dall & Bartsch, 1910. (see The Veliger, vol. 9, no. 1, p. 85)

Figure 5: *Puncturella multistriata* Dall, 1914. (see The Veliger, vol. 9, no. 1, p. 83)

Figure 6: *Puncturella cucullata* (Gould, 1846). (see The Veliger, vol. 9, no. 1, p. 83)

Figure 7: *Lepeta* sp. (see The Veliger, vol. 9, no. 1, p. 84)

Figure 8: *Thais lima* (Gmelin, 1791). The two specimens on the left are from Squirrel Island, Knight Island Group; the two on the right are from Boswell Bay, Hinchinbrook Island.